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Jeff Killelea
Department of Ecology
P O Box 47600
Olympia, WA 98504-7600

Dear Mı Killelea.

It is my opinion and experience that holding storm water runoff from conshuction sites at *25* NTU's is unrealistic and unnecessary It is also my opinion that the method of measuring turbidity, suggested at the August 9'' public hearing, is sloppy and professionally inadequate In the past few weeks, I have been unable to find any background turbidity reading of less than *25* NTU (using a turbidity meter or the D.O E suggested method) These recent samples were taken in August, when streams should be running at their cleanest due to the low volume of storm water runoff.

I acknowledge that significant efforts should be made to protect water quality down stream from constructions sites Enforcing the expectations that site discharges should not greatly impact the background turbidity readings should be observed I feel that holding storm water runoff from construction sites to *5* over. background is realistic and prudent,,

Backgmund and runoff turbidity measurements can easily be taken with a turbidity meter to ensure compliance to a 5 over background requirement This method is accurate, fast, and realistic Uniformly denying a 5 over background standard for all general permit situations must stem from motives other that creating effective, practical, and accurate means of turbidity control,

We found that the method of measuring turbidity suggested at the public hearing August 9th, using a clear tube filled with water to visually determine turbidity (JTU), to be significantly flawed. Depending on who was looking at a sample and how much ambient light was present, the target extinction point greatly varied Using visual means to derive NTU measurements fiom the suggested JTU process is proven to be inaccurate and subjective,

In researching turbidity measurements, I found the following quotes fiom a Department of Fish and Wildlife website (http://fire gov/ifcc/monitor/refGuide/turbidity htm):

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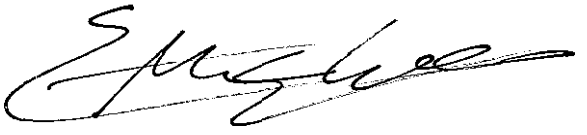
- "Visual turbidity measurements are made by observing the extinction of the image of a special candle as the amount of sample between the candle and the observer is increased ***(JTU)***.. ***This method is imprecise because it is dependent on human judgment to determine the exact extinction point.*** Moreover, turbidities lower than ***25*** JTUs or caused by dark particles, such as charcoal, cannot be measured, and the method is insensitive to fine-particle suspensions,."
- "The nephelometer detects light scattered 90' from the incident light beam because a 90' angle is considered least sensitive to variations in particle size. ***This method is precise andsensifive..***Turbiaities derived from nephelometric measurements are expressed in ***nephelometric turbidity units (NTU)***..., and ***are only approximately correlated with JTU."***

I believe that the Department of Ecology should require and enforce realistic storm water runoff standards for all construction permits (5 over background),. I also believe that turbidity measurements should be taken seriously and should be determined in a scientific, non-subjective, manor,,

Thank you for your time,



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River	Location	Date	Time	Turbidity Reading
Puyallup	Levee Rd. Under 60th Ave. Bridge	8/17/2005	11:43 AM	370 NTU
		8/18/2005	12:00 PM	730 NTU
Wapato Creek	Under 70th Ave. Bridge	8/17/2005	12:00 PM	38 NTU
		8/18/2005	12:15 PM	50 NTU